

ARC920010086US1
10/042,366REMARKS

This amendment is in response to the Examiner's Office Action dated 11/15/2005. Applicants are appreciative for the opportunity for an interview and the professional and courteous manner in which the interview was conducted on 11/29/2005. As per the examiner's suggestions, an After-Final response is hereby submitted with a clarifying amendment to claim 17.

Additional amendments have been made to claim 17 for clarification purposes only without adding new matter. Support for the amendments can be found in figures 7-9 and accompanying descriptions of the application-as-filed. Dependent claim 18 has been amended to correct antecedent basis issued without adding new matter.

Applicants are also appreciative for the recognized allowable subject matter. This amendment should obviate outstanding issues and make the remaining claims allowable. Reconsideration of this application is respectfully requested in view of the interview of 11/29/2005, the foregoing amendment, and the remarks that follow.

STATUS OF CLAIMS

Claims 1-5, 7-9, and 17-24 are pending.

Claims 1-5, 7-9, and 21-24 are allowed.

Claims 17-20 are rejected under 35 U.S.C §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

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Claim 17 is rejected under 35 U.S.C §102(e) as being anticipated by Stilp (US 6,603,428).

Claims 18-20 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C §112, second paragraph, set forth in this Office Action and to include all the limitations of the base claim and any intervening claims.

OVERVIEW OF CLAIMED INVENTION

The present invention provides for a system and method for analyzing the history of previous location reports received from a tracked entity and uses the history to estimate the relevance of future reports over time. This is accomplished by associating a computed expiration time for each report. For instance, a positioning module mounted inside a vehicle stops sending location reports in the morning when the driver arrives at work. The last report received from the vehicle (reporting the position somewhere near the work location) will have an expiration time of about 8 hours, or approximately the time the person spends at work. Similarly, when the driver arrives at home the last report will be associated with an expiration time of about 10 hours, or approximately the time spent at home every night.

This expiration time is used by a tracking application to estimate the degradation in relevance of a location report over time. A newly received location report has a high temporal relevance since it most accurately reflects the location of a tracked entity (device and user) at that point in time. However, as time passes, and if no further location reports are received, the last received location report becomes less relevant since it becomes increasingly likely that the tracked entity is no longer at the location indicated in that location report. Eventually, the

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expiration time passes and the location report has little relevance or is not relevant at all. The expiration time value is a threshold that controls the shape of the relevance degradation curve of a location report. Such an analysis of location reports can be utilized for increasing the confidence of the location of a tracked entity and for triggering a tracking application upon exceeding an identified expiration time.

In the Claims

REJECTIONS UNDER 35 U.S.C. §112

Claims 18-20 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C §112, second paragraph, set forth in this Office Action and to include all the limitations of the base claim and any intervening claims. Specifically, independent claim 17 has been rejected due to insufficient antecedent basis for the limitation "the location". As mentioned during the interview of 11/29/2005, applicants have amended the limitation from "the location" to "a location" without adding new matter to correct antecedent basis issues. Applicants respectfully respect the examiner to withdraw the 35 U.S.C. §112 rejections with respect to claims 18-20.

REJECTIONS UNDER 35 U.S.C. §102(e)

Claim 17 is rejected under 35 U.S.C §102(e) as being anticipated by Stilp (US 6,603,428). To be properly rejected under 35 U.S.C. §102(e), the cited reference must teach each and every limitation of the rejected claim. Applicants respectfully contend that claim 17 is neither anticipated nor rendered obvious in light of the Stilp reference.

The Stilp reference (USP 6,603,428) teaches a multiple pass location processing method. Stilp's method, for use in a wireless location system (WLS), is capable of locating a wireless

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transmitter based on a transmission received from the wireless transmitter, wherein the method comprises the steps of: (a) identifying the received transmission as requiring multiple pass location processing whereby the WLS produces a first, lower quality location estimate and then subsequently produces a second, higher quality location estimate; (b) producing the first location estimate and providing said first location estimate to a first location application; and (c) producing the second location estimate.

Claim 17 of applicants teaches a computer-based method for providing a measure of degradation associated with location reports (associated with one or more tracked entities) over a period of time. The method according to applicants' claim 17 comprises the steps of: (a) setting a counter to point to a first tracked entity; (b) identifying and partitioning location reports associated with the first tracked entity into one or more clusters; (c) identifying an optimal expiration time associated with each partition via time interval analysis, wherein the optimal expiration time provides a measure of degradation of a location report in a particular partition over a period of time; (d) associating location reports in each partition with corresponding optimal expiration time; (e) incrementing said counter to point to next of the tracked entities and repeating steps b-d exhaustively for remainder of said tracked entities; and (f) providing a measure of degradation of a particular location report associated with a particular tracked entity based upon identified optimal expiration time in step d.

The examiner cites column 18, lines 15-35 and column 36, lines 17-29 of the Stilp reference as teaching the limitation of "setting a counter that points to the location of said tracked entities". Applicants respectfully disagree with the examiner's statement as the citations and the Stilp reference in its entirety shows otherwise. Specifically, applicants contend that column 18,

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lines 15-35 merely teaches the establishment of "peg counters" for each communication channel in each sector of a communication system (see step S7-1 of figure 2E-1 in the Stilt reference). Applicants respectfully contend that column 18, lines 15-35 merely teach the use of counters in automatic detection of active channels in a wireless communication system and applicants further respectfully contend that such a citation, or the entire Stilt reference, cannot be equated to applicants' limitation of setting a counter to point to a first tracked entity. Absent such a showing, applicants respectfully contend that the Stilt reference cannot anticipate or render obvious applicants' claim 17.

Similarly, column 36, lines 17-29 of the Stilt reference merely teaches a means to manage "geographically defined databases using an electronic map that can create polygons encompassing a prescribed geographical area." As above, this citation fails to teach or render obvious applicants' limitation of setting a counter to point to a first tracked entity. Absent such a showing, applicants respectfully contend that the Stilt reference cannot anticipate or render obvious applicants' claim 17.

The examiner cites column 39, lines 1-23 and column 47, lines 5-32 as teaching applicants' limitation of identifying an optimal expiration time associated with each partition via time-interval analysis. Applicants respectfully disagree with the examiner's statement as the citations and the Stilt reference in its entirety shows otherwise. Specifically, applicants respectfully submit that column 39, lines 1-23 merely teaches an "expiration timestamp" that is set to "the current time plus a predetermined first interval". Applicants submit that the expiration timestamp of the Stilt reference is used to delete a roaming entry when no further transmissions are received from the roaming entry prior to the expiration of the timestamp. Applicants also

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submit that such an expiration timestamp neither anticipates nor renders obvious applicants' optimal expiration time associated with each partition and identified via time interval analysis, wherein the optimal expiration time provides a measure of degradation of a location report in a particular partition over a period of time. Hence, applicants respectfully contend that the Stilp reference cannot anticipate or render obvious applicants' claim 17.

Since the Stilp reference fails to teach or suggest many of the limitations of applicants' independent claim 17, applicants contend that the Stilp reference fails to anticipate or render obvious applicants' claim 17. Hence, applicants submit that independent claim 17 is in allowable form. Additionally, the above-mentioned arguments substantially apply to dependent claims 18-19 as they depend from an allowable claim. Hence, applicants respectfully request the examiner to withdraw the rejections with respect to claims 17-19.

SUMMARY


As has been detailed above, none of the references, cited or applied, provide for the specific claimed details of applicants' presently claimed invention, nor renders them obvious. It is believed that this case is in condition for allowance and reconsideration thereof and early issuance is respectfully requested.

As this amendment has been timely filed within the set period of response, no petition for extension of time or associated fee is required. However, the Commissioner is hereby authorized to charge any deficiencies in the fees provided to Deposit Account No. 09-0441.

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If it is felt that an interview would expedite prosecution of this application, please do not
hesitate to contact applicants' representative at the below number.

Respectfully submitted,


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